APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,588	10/23/2001	Michael Kenneth Brown	401052-A-01-US(Brown)	6479

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JOHN C. MORAN, ATTORNEY, P.C.
4120 EAST 115 PLACE
THORNTON, CO   80233-2623

EXAMINER
PHAN, JOSEPH T

ART UNIT	PAPER NUMBER
2645	

DATE MAILED: 07/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/037,588	BROWN ET AL.
	Examiner	Art Unit	
	Joseph T. Phan	2645	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 April 2005</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19,21-29 and 31* is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19, 21-29, and 31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claims 1, 17, 27 objected to because of the following informalities: Applicant

replaces the phrase "a presence of tones" in claims 1 and 17 and "detecting tones" in

claim 27 with the term "identification of tones" and "identifying tones" respectively. It is

noted that applicant's specification uses the term "detecting" when referring to tones

and "identifying" when referring to vectors and carriers. Therefore for consistency and

clarification, the term "detecting" should be used with 'tones' in the claims. Appropriate

correction is required.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

Claims 1, 11, and 17 rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 1 lines 6-8, claim 11 line 8, and claim 17 lines 9-12 recite the newly added

limitation of "analyzing using automatic speech recognition analysis calculations...the

received audio information for tones..."

Speech recognition analysis calculations can not be found and therefore makes the

claims indefinite as examiner interprets this as still using the method of speech

recognition which was previously rejected as not enabling. Applicant's specification

does not disclose how using speech recognition analysis(eg. Hidden Markov Model) is

able to analyze tones. Applicant's 'tone detector' within a speech recognition <u>unit</u>

enables the analysis(page 17 line 12-page 18 line 18).

Applicant's specification teaches that an Automatic Speech Recognition <u>Unit</u> includes a

tone detector to perform detection of tones(page 17 line 12-page 18 line 18) and not

specifically using 'speech recognition analysis calculations' analysis to perform the

detection of tones. Applicant's specification (page 12 line 10-page 13 line 18 teaches

that 'Speech recognition' is used to recognize and interpreting words, phrases, etc. in

speech.

For clarification, Examiner recommends reciting the phrase to "..analyzing using

automatic <u>speech or tone</u> recognition the received audio information..." or revise the

claim language similar to claim 27. See also examiner's response to applicant's

arguments section below for further detail.

Appropriate clarification or correction is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 11, 17-19, 21, and 27-30 rejected under 35 U.S.C. 102(b) as being

anticipated by Solot, Patent #5,644,625.

Regarding claims 1 and 17 Solot teaches a method for doing call classification on

a call to a destination endpoint, comprising the steps of:

receiving audio information from the destination endpoint(col.2 lines 3-19) and analyzing using speech recognition analysis calculations the received audio information for a first type of classification(col.5 lines 31-62);

analyzing using the automatic speech recognition analysis calculations the received audio information for a second type of classification wherein the second type of classification is for identification of tones*(col.5 lines 31-62; Solot's system uses analysis calculations to identify tones)* and

determining a call classification for the destination endpoint in response to the analysis of the first type of classification and the analysis of the second type of classification (col.5 lines 1-4, 31-62 and col.6 lines 20-25).

Regarding claims 2 and 18, Solot teaches the method of claims 1 and 17 wherein the analysis for the first type of classification is analyzing the audio information for words (col.2 lines 3-19 and col.6 lines 1-36; one number announced is a word)

Regarding claim 3 and 19, Solot teaches the method of claims 2 and 18 wherein the analyzed words are formed as phrases words (col.2 lines 3-19 and col.6 lines 1-36; the telephone number is a phrase).

Regarding claim 4 Solot teaches the method of claim 2 wherein the analysis for the second type of classification is analyzing the audio information for identifying a set of tones (col.5 lines 1-4 and 31-62).

Regarding claims 5 and 21 Solot teaches the method of claims 4 and 18 wherein the step of receiving audio information further comprises detecting speech or tones in the audio information(col.5 lines 1-4, 31-62 and col.6 lines 20-25).

Regarding claim 11 Solot teaches a method for doing call classification on a call

to a destination endpoint, comprising the steps of:

receiving audio information from the destination endpoint(col.2 lines 3-19) and detecting

speech or tones in received audio information, analyzing using automatic speech

recognition the received audio information for words in response to the detection of

speech and analyzing using automatic speech recognition the received audio

information for identification of tones in response to the detection of tones (col.5 lines

31-62);

determining a call classification for the destination endpoint in response to the analysis

of words or the analysis of tones (col.5 lines 1-4, 31-62 and col.6 lines 20-25).

Regarding claim 27, Solot teaches a call classifier for determining the call

classification of a called destination endpoint, comprising:

an automatic speech recognizer for detecting first characteristics in audio information

received from the called destination endpoint, the automatic speech recognizer further

identifying tones in the audio information received from the called destination

endpoint(col.5 lines 1-4, 31-62 and col.6 lines 20-25);

and inference engine for classifying the call in response to the automatic speech

recognizer *(Fig.1 items 5 and 13 and col.5 lines 31-62; the voice recognition board with*

the computer is an inference engine which infers by a confidence level what the word

announced is).

Regarding claim 28, Solot teaches the call classifier of claim 27 wherein the first

characteristics are words (col.2 lines 3-19 and col.6 lines 1-36; one number announced

is a word).

Regarding claim 29, Solot teaches the call classifier of claim 28 wherein the

words are formed into phrases (col.2 lines 3-19 and col.6 lines 1-36; the telephone

number is a phrase).

Regarding claim 30, Solot teaches the call classifier of claim 28 wherein the

second characteristics are tones (col.5 lines 1-4 and 31-62).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 6-10, 12-16, 22-26, and 31 rejected under 35 U.S.C. 103(a) as being

unpatentable over Solot in view of Trandal et al., Patent #6088428.

Regarding claims 6, 8, 12, 14, 22, 24, and 31, Solot teaches the methods and

call classifier of claims 5-6, 11-12, 21-22, and 30 wherein the step of analyzing for the

first and second types of classification is responsive to the detection of speech and/or

tone in the audio information.

Solot is silent on executing a Hidden Markov Model to determine the presence of

words or tones in the audio information.

Trandal, as best understood due to the 112 issues above, discloses using a

Hidden Markov Model to determine the presence of words and/or tones in audio

information (col.8 lines 16-25 and col.23 lines 17-28)

At the time the invention was made, it would have been obvious to a person of

ordinary skill in the to use the Hidden Markov Model as taught by Trandal to determine

the presence of words or tones. One of ordinary skill in the art would have been

motivated to do this because the Hidden Markov Model is a common and well-known

algorithm for recognizing speech as disclosed in Solot's speech recognition system.

Regarding claims 7, 13, and 23, Solot teaches the methods of claims 6, 12, and

22 wherein the step of executing comprises the step of using a grammar for speech

(col.5 lines 1-4, 31-62 and col.6 lines 20-25).

Regarding claims 9, 15, and 25, Solot teaches the method of claims 8, 14, and

24 wherein the step of executing comprises the step of using a grammar for tones(col.5

lines 1-4, 31-62 and col.6 lines 20-25).

Regarding claims 10, 16, and 26, Solot teaches the method of claims 8, 14, and

24 wherein the step of determining comprises the step of executing an inference engine

(Fig.1 item 13, col.5 lines 1-4, 31-62 and col.6 lines 20-25; the voice recognition board

is an inference engine which infers by a confidence level what the word announced is).

Response to Arguments

5.   Applicant's arguments filed 04/24/05 have been fully considered but they are not

persuasive. In response to applicant's argument that the references fail to show certain

features of applicant's invention, it is noted that the features upon which applicant relies

(i.e., *tones are identified using automatic speech recognition*) page 16 of arguments are

not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As previously noted, applicant's specification does not perform speech recognition to identify tones <u>in the received audio information from the destination endpoint</u>. Applicant's arguments of the pending claims are inconsistent with the specification because as noted in the arguments Fig.8, step 806 is the addition of special feature bits which is not analogous to the currently recited limitation of *"analyzing using the speech recognition analysis calculations the received audio information for identification of tones in the audio information"*; in other words, the special feature bits are added to the received audio information by applicant's system **after receiving the audio information** and therefore this argument and specific embodiment step can not read onto the claims as currently recited.

As mentioned in the last action, Applicant states in the previous argument that blocks 1111-1116 of Fig.11 and accompanying text of specification (page 26, line 25-page 27 line 3) and Fig.12-13(page 27 lines 13-20) teaches that HMM analysis is used for identification of tones. Examiner respectfully disagrees as these references by the applicant comes after the result of tone detection (see step 804 of Fig.8; specification page 24 lines 9-22) and therefore HMM analysis is not used for tone detection, the result of the tone detection is inputted to the HMM analysis along with the speech. Tone detection methods by way of frequency and timing patterns is taught on page 17 line 12-page 18 line 18 of specification.

It is hereby noted, that the claims are not limited to identifying tones using speech recognition but rather analysis calculations in which Solot's system(and any system) performs when analyzing audio, Solot performs analysis calculations on audio information to identify tones in col.5 lines 31-62.

In response to applicant's argument that the 112 2nd rejection does not set forth any of the errors listed in M.P.E.P 706.03(d) as reasons for rejection, examiner notes the following taken from 706.03(d) exactly described in MPEP 2171-2174.

"If none of these form paragraphs are appropriate, a full explanation of the deficiency of the claims should be supplied. Whenever possible, identify the particular term(s) or limitation(s) which render the claim(s) indefinite and state why such term or limitation renders the claim indefinite."

"Although an essential purpose of the examination process is to determine whether or not the claims define an invention that is both novel and nonobvious over the prior art, another essential purpose of patent examination is to determine whether or not the claims are precise, clear, correct, and unambiguous. The uncertainties of claim scope should be removed, as much as possible, during the examination process.

The inquiry during examination is patentability of the invention as applicant regards it. If the claims do not particularly point out and distinctly claim that which applicants regard as their invention, the appropriate action by the examiner is to reject the claims under 35 U.S.C. 112, second paragraph. In re Zletz, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989). If a rejection is based on 35 U.S.C. 112, second paragraph, the examiner

should further explain whether the rejection is based on indefiniteness or on the failure

to claim what applicants regard as their invention. Ex parte Ionescu, 222 USPQ 537,

539 (Bd. App. 1984)."

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joseph T. Phan whose telephone number is (571) 272-

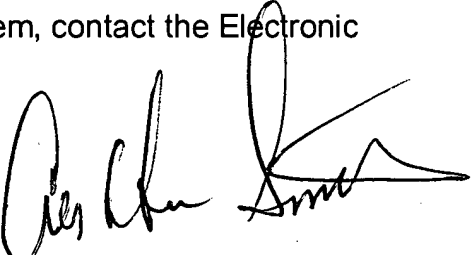7544. The examiner can normally be reached on Mon-Fri 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

JTP
July 7, 2005

CREIGHTON SMITH
PRIMARY EXAMINER